



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:
JOHN M. CURRAN

Application No.: 10/613,539

Filing Date: 07/03/03

FOR: IMPROVED SYSTEM AND
METHOD FOR FACILITATING PIPE AND
CONDUIT COUPLING

SUPPLEMENTAL
OPENING BRIEF RE APPEAL

EXAMINER: J. M. HEWITT

Art Unit: 3679

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REAL PARTY IN INTEREST

The real party in interest is inventor John M. Curran. Mr. Curran's employer, Custom Pipe and Coupling Company, 10560 Fern Street, Stanton, CA 90680, may have rights in the invention and patent application.

RELATED APPEALS AND INTERFERENCES: NONE

STATUS OF CLAIMS

- -Listing of Claims - -

Claim 1 (Under final rejection and appeal)

A system for facilitating coupling pipes at their ends in substantially fluid – tight relationship comprising:

- (1) Clamping means for clamping around said pipe ends said clamping means including at least one screwhole for receiving at least one screw for fastening, by securing at least one nut thereon, said clamping means over gasket means and said pipe ends , said at least one screw being configured such that it is loosely disposed in said at least one screw hole of said clamping means prior to fastening of said clamping means around said pipe ends;
- (2) gasket means for interposition between said clamping means and said pipe ends; and
- (3) resilient retention means, resiliently engageable with said at least one screw, for loosely retaining said at least one screw in said at least one screw hole while said at least one screw is loosely disposed in said at least one screw hole prior to fastening said clamping means together by securing said at least one nut with said at least

one screw, said resilient retention means being resiliently positionable from the side of the shank and from the front of the shank of said at least one screw into engagement with said at least one screw to loosely retain said at least one screw in said screw hole prior to fastening said clamping means together by securing said at least one nut with said at least one screw.

Claim 2. (Under final rejection and appeal).

The invention as set forth in Claim 1 wherein said retention means is frictionally resiliently engageable with said at least one screw by placement between threads thereof to provide said retention.

Claim 3. (Under final rejection and appeal).

The invention as set forth in Claim 1 wherein said resilient retention means is resiliently positionable on the end of the shank of said at least one screw for frictional resilient engagement therewith.

Claim 4. (Under final rejection and appeal).

The invention as set forth in Claim 1 wherein said resilient retention means comprises a member composed of resilient material.

Claim 5. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means is thin relative to the length of said at least one screw.

Claim 6. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means is composed of resilient metal.

Claim 7. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means defines at least one internal opening for being positioned onto said at least one screw from the end of the shank thereof.

Claim 8. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means defines at least one lateral opening having two separate ends for sideways resilient positioning of said retention means upon the shank of said at least one screw by resiliently displacing from each other said two ends of said at least one lateral opening to accommodate said at least one screw.

Claim 9. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said retention means has a generally circular configuration.

Claim 10. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said retention means has a generally square configuration.

Claim 11. (Under final rejection and appeal).

The invention as set forth in Claim 7 wherein said at least one internal opening is substantially polygonal.

Claim 12. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means includes adhesive means for adhesion to said at least one screw.

Claim 13. (Under final rejection and appeal).

In a pipe coupling system for coupling pipe ends in substantially fluid – tight relationship including gasket means positionable on said pipe ends and clamping means fastenable on said pipe ends and said gasket means, said clamping means being fastenable by securing at least one nut on said at least one screw insertable through at least one screw hole in said clamping means, said at least one screw being loosely disposed in said at least one screw hole, prior to securing of said at least one screw by said at least one nut, the improvement comprising:

resilient retention means for loosely retaining said at least one screw in place when loosely disposed in said at least one screw hole inserted in said clamping means and prior to fastening of said clamping means by securing said at least one nut on said at least one screw, said resilient retention means being resiliently positionable from the side of the shank of said at least one screw into retention engagement to loosely retain said at least one screw in said at least one screw hole.

Claim 14. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said retention means is frictionally resiliently engageable with said at least one screw.

Claim 15. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means is resiliently positionable at the end of the shank of said at least one screw for frictional resilient engagement therewith.

Claim 16. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means comprises a member composed of resilient material.

Claim 17. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means is thin relative to the length of said at least one screw.

Claim 18. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means is composed of resilient metal.

Claim 19. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means defines at least one internal opening for being placed onto said at least one screw from the end of the shank thereof.

Claim 20. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said retention means defines at least one lateral opening having two separate ends for resilient sidewise placing of said resilient retention means upon the shank of said at least one screw by displacing said two separate ends from each other to accommodate said at least one screw.

Claim 21. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means has a generally circular configuration.

Claim 22. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means has a generally square configuration.

Claim 23. (Under final rejection and appeal).

The invention as set forth in Claim 19 wherein at least one internal opening is substantially polygonal.

Claim 24. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means include adhesive means for adhesion to said at least one screw.

Claim 25. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means is positionable upon said at least one screw from the side of the shank thereof for frictional resilient engagement between threads of said at least one screw therewith.

Claim 26 (Under final rejection and appeal).

A method for facilitating coupling at least two conduits at their ends in substantially fluid-tight relationship comprising the steps of:

- (1) providing gasket means for disposition upon said at least two conduits;

- (2) providing clamping means for clamping around said conduit ends and including at least one screw hole for receiving at least one screw for fastening said clamping means upon said gasket means and said conduit ends in substantially fluid-tight relationship by securing at least one nut to said at least one screw;
- (3) placing said at least one screw loosely in said at least one screw hole prior to securing said at least one nut to said at least one screw; and
- (4) disposing resilient retention means laterally upon the side of the shank of or upon the front of said at least one screw to prevent said at least one screw from exiting said at least one screw hole prior to said fastening of said clamping means and said gasket means.

Claim 27. (Under final rejection and appeal).

The method as set forth in Claim 26 wherein said resilient retention means is frictionally resiliently engageable with said at least one screw to accomplish retention thereof.

Claim 28. (Under final rejection and appeal).

The method of Claim 26 further including the step of fastening said gasket means and said clamping means onto said conduit ends by tightening said at least one screw

until substantially fluid-tight relationship is achieved
between said conduits.

Claim 29. (Under final rejection and appeal).

The method of Claim 26 wherein said conduits comprise
pipes.

STATUS OF AMENDMENTS:

No amendments have been filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Concise information for independent claims 1, 13, and 26.

(1) Claim 1. This claim involves a system 10, (Fig. 5, specification page 4, lines 8-15) for facilitating coupling pipes (12, 14, Fig. 5; specification p.4, lines 1-2) at their ends in substantially fluid-tight relationship comprising clamping means (reference numerals 20,22, Figs. 1,2; specification, p.4. lines 8,9), the clamping means (20, 22, Figs. 1,2; specification p. 4, lines 8,9) including at least one screwhole (48, 48'; 50, 50'; Figs. 1,2; specification p.4 lines 9-11), for receiving at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) the screen being configured such that it is loosely disposed in at least one screwhole (48,48'; 50,50' Figs. 1, 2; specification p.4 lines 9-11), for receiving at least one screw (24, 24', 26, 26', Figs. 1,2; specification, p.4 lines 13,14) for fastening, by securing at least one nut thereon, said clamping means (20, 22, Figs. 1,2; specification p. 4, lines 8,9) over gasket means (32, Fig. 5; specification p.4, lines 16-23) and the pipe-ends (16, 18, Fig. 5; specification page 4, lines 1-2) the at least one screw (24, 24', 26, 26', Figs. 1, 2; specification, p.4, lines 13-14) being configured such that it is loosely disposed in the at least one screwhole (48, 48'; 50,50; Figs. 1,2; specification, p.4 lines 9-11) of the clamping means (20,22; Figs. 1, 2; specification, p.4, lines 8-9) prior to fastening of the clamping means (20,22; Figs. 1,2; specification, p.4, lines 8-9) around the pipe ends (12, 14, Fig. 5; specification, p.4, lines 1,2), and resilient retention means (46, Fig. 1; specification, p.5, line 3) resiliently engagable with the at least one screw (24, 24', 26, 26'; Figs. 1, 2; specification p 4, lines 13, 14) for loosely retaining the at least one screw (24, 24', 26, 26'; Figs. 1, 2; specification, p.4, lines 13, 14) in the at least one screw-hole (48, 48'; 50,50; Figs. 1,2; specification, p.4 lines 9-11) while the at least one screw (24, 24', 26, 26'; Figs. 1, 2; specification, p.4, lines 13, 14) is loosely disposed in the at least one screwhole (48, 48'; 50,50; Figs. 1,2; specification, p.4 lines 9-11) prior to fastening the clamping means (20, 22; Figs. 1,2; specification, p.4, lines 8-9) together by securing the at least one nut with the at least one screw (24, 24', 26, 26'; Figs. 1, 2; specification, p.4, lines 13, 14), the resilient retention means (46, Fig. 1; specification, p.5, line 3) being resiliently positionable from the side of the shank (25, Figs. 1,2; specification p.5, lines 11,12; p.5 lines 13-15) and from the front of the shank

of the at least one screw (24, 24', 26, 26'; Figs. 1, 2; specification, p.4, lines 13, 14) into engagement with the at least one screw (24, 24', 26, 26'; Figs. 1, 2; specification, p.4, lines 13, 14) to loosely retain the at least one screw (24, 24', 26, 26'; Figs. 1, 2; specification, p.4, lines 13, 14) in the at least one screwhole(48,48'; 50,50' Figs. 1, 2; specification p.4 lines 9-11) prior to fastening the clamping means (20, 22, Figs. 1,2; specification p. 4, lines 8,9) together by securing the at least one nut with the at least one screw, including gasket means (32, Fig. 5; specification p.4, lines 16-23) for interposition between the clamping means (20, 22, Figs. 1,2; specification p. 4, lines 8,9) and the pipe ends (12, 14, Fig. 5; specification, p.4, lines 1,2).

(2) Claim 13: In a pipe coupling system (10, Fig. 5, specification page 4, lines 8-15)) for coupling pipe-ends (12, 14, Fig. 5; specification, p.4, lines 1,2) in substantially fluid tight relationship including gasket means (32, Fig. 5; specification p.4, lines 16-23) positionable on the pipe-ends (12, 14, Fig. 5; specification, p.4, lines 1,2) and clamping means (20,22; Figs. 1, 2; specification, p.4, lines 8-9) fastenable on the pipe-ends and the gasket means (32, Fig. 5; specification p.4, lines 16-23) the clamping means (20, 22, Figs. 1,2; specification p. 4, lines 8,9) being fastenable by securing at least one nut on at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) insertable through at least one screwhole (48,48'; 50,50' Figs. 1, 2; specification p.4 lines 9-11) in the clamping means (20,22; Figs. 1, 2; specification, p.4, lines 8-9), the at least one screw 24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) being loosely disposed in the at least one screwhole (48,48'; 50,50' Figs. 1, 2; specification p.4 lines 9-11) prior to securing of the at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) by the at least one nut the improvement comprising: resilient retention means (46, Fig. 1; specification, p.5, line 3) for loosely retaining the at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) in place when loosely disposed in the at least one screw-hole (48,48'; 50,50' Figs. 1, 2; specification p.4 lines 9-11) in the clamping means (20,22; Figs. 1, 2; specification, p.4, lines 8-9) and prior to fastening of the clamping means (20,22; Figs. 1, 2; specification, p.4, lines 8-9) by securing the at least one nut on the at least one screw (46, Fig. 1; specification, p.5, line 3), the resilient retention means (46, Fig. 1; specification, p.5, line 3) being resiliently positionable from the side of the shank(of the at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) into retention engagement to loosely retain the at

least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) in the at least one screw-hole (48,48'; 50,50' Figs. 1, 2; specification p.4 lines 9-11).

(3) Claim 26: A method for facilitating coupling at least two conduits at their ends (12, 14, Fig. 5; specification, p.4, lines 1,2) in substantially fluid tight relationship comprising the steps of:

- (1) providing gasket means (32, Fig. 5; specification p.4, lines 16-23) for disposition upon the at least two conduits (12, 14 Fig. 5; specification p. 4, lines 1-5).
- (2) providing clamping means (20, 22, Figs. 1,2; specification p. 4, lines 8,9) for clamping around the conduit ends (12, 14, Fig. 5; specification, p.4, lines 1,2) and including at least one screwhole (48,48'; 50,50' Figs. 1, 2; specification p.4 lines 9-11) for receiving at least one screw (24, 24', 26, 26', Figs. 1,2; specification, p.4 lines 13,14) for fastening the clamping means (20, 22, Figs. 1,2; specification p. 4, lines 8,9) upon the gasket means (32, Fig. 5; specification p.4, lines 16-23) and the conduit ends (12, 14, Fig. 5; specification, p.4, lines 1,2) in substantially fluid tight relationship by securing at least one nut to the at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14).
- (3) placing the at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) loosely in the at least one screw-hole (48,48'; 50,50' Figs. 1, 2; specification p.4 lines 9-11) prior to securing the at least one nut to the at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14);
- (4) disposing resilient retention means (46, Fig. 1; specification, p.5, line 3) laterally upon the side of the shank (25, 25', 27, 27', Figs. 1-3, Specification p. 5) or upon the front of the at least one screw (24, 24', 26, 26', Figs. 1,2; specification p.4, lines 13, 14) to prevent the at least one screw from exiting the at least one screw-hole prior to the fastening of the clamping means (20, 22, Figs. 1,2; specification p. 4, lines 8,9) and the gasket means (32, Fig. 5; specification p.4, lines 16-23)

Grounds of Rejection to be Reviewed on Appeal.

- (1) Whether Claims 1-11, 13-23, and 25-29 are unpatentable under 35 USC 103 over Munday (U.S. Pat. No. 4,653,782) in view of Lochridge (U.S. Pat. No. 3,603,617) and further in view of O'Connor (U.S. Pat. No. 2,779,375),
- (2) Whether Claims 12 and 24 are unpatentable under 35 USC 103 (a) over Munday (U.S. Pat. No. 4,653,782), in view of Lochridge (U.S. Pat. No. 3,603,617), and O'Connor (U.S. Pat. No. 2,779,375) and further in view of Crowther (U.S. Pat. No. 1,874,462).

ARGUMENT.

A. REJECTION OF CLAIMS 1-11, 13-23, AND 25-29 UNDER 35 USC 103 (A)
OVER MUNDAY (U.S. PAT. NO. 4,653,782) IN VIEW OF LOCHRIDGE (U.S.
PAT. NO. 3,603,617) AND FURTHER IN VIEW OF O'CONNOR (U.S. PAT.
NO. 2,779,375).

Rejection of amended claims 1-11, 13-23, and 25-29, for alleged obviousness under 35 USC sec. 103(a) is legally and factually erroneous and should be reconsidered and reversed on this appeal.

In formulating a rejection under 35 USC Sec. 103(a) based on a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed. Memorandum to the Patent Examining Corps, responding to the KSR decision, Margaret A. Focarino, Deputy Commissioner for Patent Operations, quoted in Patent, Trademark, and Copyright Journal, vol. 74 #1828, page 380 (July 27, 2007).

"To determine whether there was an apparent reason to combine the known elements in the way a patent claims, it will often be necessary to look to the interrelated teachings of multiple patents; to the effects of demands known to the design community or present in the marketplace; and to the background knowledge possessed by a person having ordinary skill in the art. To facilitate review, this analysis should be made explicit."

KSR Int'l. Co. v. Teleflex, Inc., #04-1350 (550 US ____); 127 S. Ct. 1727 (April 30, 2007), 82 USPQ 2d 1385 (74 PTCJ 5,5/4/07), at 14.

"First there must be some suggestion or motivation... to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP Sec. 2142.

In KSR, the Supreme Court cited with approval the Graham v. John Deere standard for making an obviousness determination whereby "secondary considerations such as commercial success, long felt but unsolved needs, failure of others, etc. might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." KSR at 2.

Under the foregoing governing authorities, the Office Action clearly failed to discharge the PTO's burden of identifying the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed. Further, the Final Rejection Office Action failed to take account of the "secondary considerations" which provide evidence of patentability as shown hereinbelow.

As demonstrated in the prosecution before the examiner and hereinbelow, the PTO has failed by all criteria set forth above to discharge its burden of proof of unpatentability.

The Final Rejection Office Action erroneously alleges: "As is evident from the figures and Col. 1, line 35 – Col. 2, line 29, Munday discloses the claimed invention as set forth in Claims 1-29, except for the retention means.

"Munday discloses a pipe repair clamp comprising two identical halves, a gasket means (12) and securing means (10, 11) including nuts and bolts. Munday states that his clamp can be used to join pipes of slightly varying external diameters. Munday employs washers on one end of the bolts (10) on one side of the lugs (6, 7).

Lochridge teaches a pipe coupling assembly with securing means that includes nuts, washers, and bolts. Lochridge employ [sic.] washers (31, 32) on each end of the bolts as is known in order to better distribute the load on each end of the bolts. Accordingly, it would have been obvious to one having normal skill in the art at the time the invention was made was made to modify Munday to employ an additional washer at the head end of the bolts, as taught by Lochridge in order to better distribute the load on each end of the bolts. Munday/Lochridge fail to teach that the washers are split lock washers which act to effectively retain the bolts to the clamp-halves.. O' Connor teaches such a washer (see Fig. 4 and Co1.2, lines 31-49); one that is used to temporarily retain bolts in an assembled relationship until they are finally joined in the finished product. O' Connor's split washer also permits lateral positioning of the washer on a bolt or screw. In view of O' Connor's teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ split-lock washers in Munday/Lochridge in order to temporarily retain the clamping bolts in an assembled relationship with the clamp-halves, until they are finally joined, and to permit lateral positioning of the washers on the bolts."

Office Action, pages 2-3. (Emphasis added).

The above-described attempted hindsight reconstruction is legally and factually erroneous regarding the invention as defined by the claims. It continues to be the law that there is no suggestion to combine references if a reference teaches away from its combination with another source. See Tec Air Inc. v. Denso Manufacturing Michigan Inc., 192 F.3d 1353, 52 USPQ 2d1294 (Fed. Cir. 1999).

As quoted with approval in Tec Air, "a reference may be said to teach away when a person of ordinary skill would be discouraged from following the path set out in the reference, or would be led in a path divergent from the path that was taken by the Applicant [or] if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the Applicant." In re Gurley, 27 F.3d 551, 31 USPQ 2d 1131 (Fed. Cir. 1994).

The foregoing authorities squarely apply to render the attempted hindsight reconstruction of Applicant's invention factually and legally invalid.

In all of the cited art, there can be found no reference to or suggestion of Applicant's loose retention by resilient retention means of screws in screw holes prior to final fastening with a nut, nor is there any reference to or suggestion of a need for or feasibility of such a provision. In all of the references, the washers are used as conceded in the Office Action "to distribute load more evenly" thus providing a more stable final securement. Further, in the O'Connor reference the washer sought to be analogized to the retention means of the present application, is rigid and provides for holding a screw in a screw hole rigidly and with a complicated arrangement whose nature is suggested by the name/title of the O' Connor patent "Split Washer Having One Helical Margin and One Planar Margin Adapted to be Secured to Threaded Fastener."

As disclosed in the O'Connor patent, a split-ring lock washer 20 has an annular flange 24 "integral with the washer body [which] projects radially inwardly from the inner margin of the washer body and overlies an outwardly swaged annular end portion 26

of the skirt 18 [which depends from the clamping face 16 of a nut member 12]." O' Connor, Col. 1 lines 60-65.

As further stated in the O' Connor disclosure,
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"Thus, the skirt and the flange 24 cooperate to preclude axial disassembly of the nut and lock washer... "The washer body 22 is partially helically disposed so that it will provide a progressively increasing locking pressure as the unit is clamped against a work piece. More specifically, the outer peripheral margin 28 of the washer body is helically disposed in the manner shown, but at the same time it should be noted that the inner margin of the washer body is formed so that the flange 24 lies substantially in a single plane. This structure provides the washer body with high resistance to collapsing, or in other words, the washer body is very stiff, and when collapsed will exert a relatively high pressure for locking the nut member against unauthorized retrograde movement."

O' Connor, Col. 1 Lines 65-67; Col. 2, lines 1-13, 26-30. (Emphasis added).

Clearly, the "very stiff" washer of O' Connor bears no resemblance in structure or function to the resilient retention means of the subject application. Moreover, in the present invention, the resilient retention means has no function in the final secured assembly (Curran Declaration, para. 3.), in contrast to the washers in the cited references, all of which perform a function in the final secured assembly. Appendix Exhibit 1.

In an attempt to meet the foregoing argument, the final rejection Office Action asserted the following definition of a key term herein:

"O' Connor's washer is considered resilient at least to a degree as it is a relatively thin, split metal washer. Also refer to Figs. 5-6. Furthermore, if O' Connor's washer was not resilient to a degree, it would not function as intended. The term 'very stiff does not preclude resilience.' (Emphasis added.)

Petitioner hereby requests that the Board take judicial notice of the fact the definitions of the words "stiff" and the word "resilient" which are commonly used and accepted and which are "capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned" [such as a dictionary] (thus meeting the criteria for a fact of which judicial notice may be taken, under F.R.C.P. 201(b)) establish that the Examiner's interpretation is incorrect, and that under the commonly accepted definitions/uses of the two terms "resilient" and "very stiff", they are in fact mutually exclusive.

"Resilient" is defined as:

"Returning freely to a previous position, shape, or condition...springy, buoyant...synonyms: see elastic, flexible."

Webster's Third New International Dictionary p. 1932, Volume II, Merriam-Webster, Inc. (1981).

and from the same commonly available and not reasonably disputable source comes the following definition of "stiff":

"Incapable of or resistant to being flexed or bent—rigid...lacking in suppleness."
Id. at p. 2242, Volume III.

Based on the above, Petitioner requests that the Board take notice under F.R.C.P. 201(b) that the commonly used and accepted definitions of the terms in question render them mutually exclusive. Accordingly, because they run directly against the standard definitions of the terms as set forth in sources which are both readily available and beyond reasonable dispute, and further because they are unsupported by any other any other evidence, Petitioner requests that the Board overrule the unreasonable and erroneous interpretations of the terms in question as set forth by the Final Rejection Office Action.

There is also no logical or engineering basis for or explanation of the allegation that:

"If O'Connor's washer was not resilient to a degree, it would not function as intended." (Office Action, Page 3, lines 13-14).

There is no support for the foregoing contention in O'Connor, or in the general understanding in the art. Thus, this remark cannot be accorded any weight.

Similar considerations apply to the self-procured definition in the Office Action of the term "loose":

"As to the requirement that the screws are *loosely* [emphasis in original] retained, the term 'loose' is a relative term. And Munday's screws are considered loosely retained in their respective screw-holes because they are not and cannot be interference fit in their holes on order for Munday's device to function properly. Munday's screws are

considered to be loosely retained in the screw-holes, at least to a degree.” (Emphasis added in last sentence, emphasis in the original in first sentence).

Petitioner again requests that the Board take notice under F.R.C.P. 201(b) of the commonly used and accepted definition of the term “loose”:

“not rigidly fastened or securely attached: lacking a firm or tight connection: ready to move or come apart from an attachment...lightly secured or made fast...having relative freedom of movement or arrangement as a result of being only locally restrained or fixed...permitting some freedom of movement...”

Webster’s Third New International Dictionary, *supra*, Volume II, page 1335. Appendix Exhibit 4.

In Munday, contrary to the allegations of the Examiner, the two-piece split collar with two identical pieces (1) made of metal or rigid plastic is connected together by means of nut and bolt assemblies 10, 11. Munday, Col.1, lines 35-37, 50-52. There is no mention of or reference to any “loose fit” nor is there any provision for loose retention of a screw in a screw-hole prior to fastening by a nut. Regardless of the examiner’s lexicographical eccentricities, there is no claim element of a screw in the subject patent application; rather, the disputed claims contain elements such as “resilient retention means, resiliently engageable with said at least one screw for loosely retaining...the screw in the screw-hole while the at least one screw is loosely disposed in said at least one screw-hole prior to fastening said clamping means together by securing said at least one nut with said at least one screw.” Claim 1, lines 14-20. Similar language appears in Claims 13 and 25. Thus, the final rejection is clearly the product of a misunderstanding of the claim language as well as an arbitrary redefinition of well-settled terms.

The same considerations which apply to render patentable independent claim 1 squarely apply to render patentable dependent claim 2 (“said retention means is frictionally resiliently engageable with said at least one screw by placement between threads thereof...”); dependent claim 3 (“said resilient retention means is resiliently positionable on the end of the shank of the said at least one screw for frictional resilient engagement therewith”); dependent claim 7 (“resilient retention means defines at least one internal opening for being positioned on to said at least one screw from the end of the shank thereof;” and dependent claim 8 (“resilient retention means defines at least one lateral opening having two separate ends for sideways resilient positioning...upon the shank of said at least one screw by resiliently displacing from each other said two ends of said at least one lateral opening to accommodate said at least one screw.”)

As in the case of independent claim 1, there is no showing, suggestion, or motivation in the cited art to combine references to reach these claims, nor is there any meaningful response in the final rejection to the undisputed fact that the references teach away from the claims as shown above in the discussion concerning claim 1.

The same considerations apply to dependent claims 14, 15, 19, and 20, all of which depend from independent claim 13.

To the same effect, are considerations rendering patentable dependent claim 26 depending from dependant claim 25.

The rejection of amended claims 10, 21, 22, and 23 under 35 USC 103(a) as being allegedly unpatentable over Munday (U.S. 4,653,782), in view of Lochridge (U.S. 3,603,617) and further in view of o' Connor (U.S. 2,779,375) utterly fails to meet the requirements imposed by law for such rejection to be valid.

Regarding claims 10 and 22, these claims are nonobvious per se as depending respectively from nonobvious claim 1 and nonobvious claim 13. Moreover, it would make no sense whatsoever to change the depicted circular orifices in the reference washers to any shape at all except round in view of the fact that they must fit snugly on round screws. This is in contrast to the resilient retention means of Applicant's invention, which resiliently contacts screws in loose retention in screw holes prior to final securement and need not be shaped similarly to the cross-section of the screws. Similar considerations apply to claims 11 and 23 as apply to render the rejection of claims 10 and 22 invalid.

B. THE FINAL REJECTION OF CLAIMS 12 AND 24 UNDER 35 USC 103(A) AS BEING ALLEGEDLY UNPATENTABLE OVER MUNDAY (U.S. 4,653,782), IN VIEW OF LOCHRIDGE (U.S. 3,603,617) AND FURTHER IN VIEW OF O' CONNOR (U.S. 2,779,375) AND FURTHER IN VIEW OF CROWTHER (U.S. 1,874,462).

Regarding Claims 12 and 24, the final rejection of these claims as allegedly unpatentable over Munday, in view of Lochridge and O' Connor, and further in view of Crowther (U.S. 1,874,462), is invalid for failure to meet the requirements imposed by law for validity of such rejection.

The attempted patchwork reconstruction of four (!) patents to reach the claims at issue, is suggestive of invalidity of the rejection on its face. Furthermore, there would be no basis in reason or fact to provide adhesion means for the washers in Munday, Lochridge, and O' Connor, for securing a lock washer against a bolthead, since in all of those situations, the washers fit snugly on the screw and are "very stiff. It would make sense only in Applicant's device to employ adhesive means for the loosely fitting retention means loosely holding a screw in a screw hole.

Accordingly, the PTO has utterly failed to discharge its burden of proof of unpatentability of the claims and specifically, the burden of identifying the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed. As a result, the rejection of the claims is invalid, must be reversed on appeal, and the application should be allowed in its entirety. Memorandum to the Patent Examining Corps from Deputy Commissioner Focarino, *supra*.

In addition, as stated by the inventor John Curran in his supporting declaration filed in the prosecution before the examiner, the invention of the application fills a long-felt but unsolved need for a retention device for loosely holding screws in screw holes prior to assembly/fastening. (Curran Declaration, para. 4).

Therefore, on the basis of the "secondary consideration" of long-felt but unsolved need. the rejection for obviousness is invalid. KSR, *supra*.

C. EXAMINER'S RESPONSE TO 11/30/07 AMENDMENT

At pages 4-6 of the Final Rejection Office Action appeared comments styled "response to argument" referring to the argument set forth in Applicant's amendment filed November 30, 2007. The responses of the examiner add nothing to prior arguments and in fact demonstrate a lack of understanding of some of the claims.

The first response includes the allegation that “in each of the above rejections, a motivation statement is provided.” In truth and in fact however, no such “motivation statement” per se was to be found. As demonstrated above, there is no showing of any suggestion or motivation in any of the cited references of Applicant’s loose retention by resilient retention means of screws in screw holes prior to final fastening with a nut, nor is there any reference to or suggestion of a motivation or feasibility of such a provision. Citing as authority In re McLaughlin, 443 F.2d 1392 170 USPQ 209 (CCPA 1971), the response was that such reconstruction was legitimate if it were within the “knowledge of the art.” The citation does not support this position on at least two grounds:

- (1) It requires that secondary considerations be evaluated together with attempted combination of references in determining final validity of the legal conclusion of invalidity.

As stated by the CCPA

“We emphasize that [such requirement for taking into account secondary considerations] is true even where, as here, the claimed invention involves only relatively simple mechanical concepts.”
170 USPQ at 212.

- (2) In addition, the assertion that there was knowledge within the level of ordinary skill does not recognize the indisputable fact that no reference refers to the need for, desirability of, or feasibility of Applicant’s loose retention by resilient retention means of screws in screwholes prior to final fastening with a nut and that the art teaches away from this as shown above.

In a further response appears the contention,

“In response to Applicant’s assertion that it would make no sense to change O’Connor’s circular orifices to any shape but round as they must fit snugly on round screws, then how must those washers having polygonal orifices work with the round screws of the instant invention? It should be appreciated that the skilled artisan could select a washer with a properly dimensioned polygonal orifice that would be compatible and function as intended with the given round screw.”
(Office Action, p. 5,6)

This comment once again reveals a lack of understanding of the invention in that as conceded the references show washers fitting snugly on screws whereas the examiner refuses to acknowledge that Applicant's retention means are resilient and not stiff. Of course, it would make no sense to try to fit a stiff square-holed washer onto a onto a round cross-section screw, whereas it makes complete sense to do so when the retention means is resilient and can engage the screw to retain it in place prior to fastening thereof by a nut.

Also erroneous is the allegation in a further response "Applicant's assertion that combining four patents to read on the claims is suggestive of the invalidity of the rejection is only conjecture." (Office Action, page 6.) It is not "conjecture" (which allegation is not substantiated) to adhere to Federal Circuit Law as follows:

"Care must be taken to avoid hindsight reconstruction by using the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit."
Grain Processing Corp. v. American Maize-Products Corp., 840 F. 2d 902, 5 USPQ 2d 1788 (Fed. Cir. 1988).

This is a clear case of using Applicant's claims and disclosure as a "guide through the maze of prior art references."

Also not well-taken is a further response at page 6 of the Office Action: "In response to Applicant's assertion that there is no basis in reason or fact to provide adhesion means for O'Connor's washer for securing the washer against the bolthead since the washer fits snugly and is 'very stiff', the fact that the washers fit snugly and are stiff does not preclude employing means to ensure that separation is prevented. Crowther is evidence of this. Crowther's lock washer fits snug and is relatively stiff. Crowther employs adhesion means in order to effectively secure the washer in a fixed position upon the bolt."

Again, an invalid analogy is asserted in that no adhesion means "in order to effectively secure the washer in a fixed position upon the bolt" is shown or suggested in Applicant's

invention, there being no requirement for a "fixed position" but rather simply for engagement of the resilient retention means with the screw.

D. CONCLUSION

On the basis of the foregoing it is respectfully submitted that Applicant/Appellant has demonstrated the legal and factual insufficiency of the final rejection of all claims and that consequently, the final rejection must be reversed on appeal and all claims must be allowed.

Respectfully submitted,
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Dated: 02/17/2009

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EVIDENCE

APPENDIX

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
JOHN M. CURRAN

Application No.: 10/613,539

Filing Date: 07/03/03

FOR: IMPROVED SYSTEM AND
METHOD FOR FACILITATING PIPE AND
CONDUIT COUPLING

DECLARATION OF JOHN M. CURRAN IN
SUPPORT OF RESPONSE TO OFFICE
ACTION DATED 08/02/2006

EXAMINER: J. M. HEWITT

Art Unit: 3679

Commissioner for Patents
P.O. Box 1450
Arlington, VA 22313-1450

John M. Curran hereby declares as follows:

- (1) My name is John M. Curran. I am the inventor on the within patent application for Improved System and Method for Facilitating Pipe and Conduit Coupling. My address is 10560 Fern Street, Stanton, CA 90680. I make this Declaration in support of Response to Office Action dated 08/02/2006 specifically in support of patentability of the invention in the within patent application. I make this Declaration upon personal knowledge and have first hand familiarity with the contents of this Declaration. If called as a witness, I could and would confidently and truthfully testify in accordance with this Declaration.
- (2) I have been engaged in the business of fitting and laying heavy pipe particularly in subsurface venues for 12 years. During that time, in connection with my

occupation, I have become familiar with the level of normal skill in the art in my field and I have become familiar with devices that have been or are in use in the field including devices for pipe coupling.

(3) I have reviewed the references cited in the Office Action regarding the within patent application mailed 06/21/2007, and find them to have no pertinence to my invention. None of the references taken singly or in combination shows or suggests my invention. None of the devices in the references employs a thin, flexible, resilient retention ring as in my invention. My invention includes substantial flexibility with respect to size because my device does not need to be sized precisely to the dimensions of the screw in view of its resiliency and the manner in which it is placed on the screw to retain the screw loosely in the screwhole prior to permanent securing/fastening, my retention ring being placeable sideways or frontally on the screw—that is simply placed on the screw from the front or side of the screw. Upon being placed on the screw, my retention ring resiliently frictionally engages between a successive pair of threads on the screw, the result being that the screw is loosely held in the screwhole prior to permanent fastening by a nut engaging with the screw. In permanent fastening, my retention ring has no function whatsoever, its role being only to retain the screw loosely in the screwhole prior to permanent fastening by a nut.

(4) Because of the shortcomings of existing devices stated in detail in my declaration dated December 1, 2006, of record herein, there has been a general dissatisfaction in my industry with devices retaining screws in place prior to finally securing them in pipe couplings, and my device has completely answered that problem and resolved it such that I have had very extensive success with my invention, both commercially and with respect to efficiency and cost-effectiveness.

(5) The device shown in the O'Connor reference, U.S. Pat. No. 2,779,375 is an example of the difficulties with existing devices, and it is not pertinent to patentability of my invention. The O'Connor device uses a lock washer 20 which holds a threaded screw in place in a threaded workpiece by means of an annular flange 24 which engages with a skirt 18 on the screw. The lock washer 20 is axially resilient (Col. 2, Line 70) and has a washer body which is very stiff, and when collapsed, will aid in prevent unwanted unscrewing. (Col. 2, Lines 28-30). This complicated agreement could not work for large pipes and screws and bolts in which my invention operates. All of the other devices in the references cited in the 6/21/07 Office Action either do not apply in the field in which my invention is used i.e. loosely holding together prior to securing screws placed between clamps for holding the pipes, or do not operate in the same way that my invention operates, i.e. engagement between successive threads by a resilient, thin member placed sideways or frontally on the screw and having no role or function in the permanent fastening/securement of the screw and nut.

I hereby declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed under penalty of perjury this 31st day of October, at Stanton, California.


John M. Curran

CLAIMS

APPENDIX

Claim 1 (Under final rejection and appeal)

A system for facilitating coupling pipes at their ends in substantially fluid – tight relationship comprising:

(4) Clamping means for clamping around said pipe ends said clamping means including at least one screwhole for receiving at least one screw for fastening, by securing at least one nut thereon, said clamping means over gasket means and said pipe ends , said at least one screw being configured such that it is loosely disposed in said at least one screw hole of said clamping means prior to fastening of said clamping means around said pipe ends;

(5) gasket means for interposition between said clamping means and said pipe ends; and

(6) resilient retention means, resiliently engageable with said at least one screw, for loosely retaining said at least one screw in said at least one screw hole while said at least one screw is loosely disposed in said at least one screw hole prior to fastening said clamping means together by securing said at least one nut with said at least one screw, said resilient retention means being resiliently positionable from the side of the shank

and from the front of the shank of said at least one screw into engagement with said at least one screw to loosely retain said at least one screw in said screw hole prior to fastening said clamping means together by securing said at least one nut with said at least one screw.

Claim 2. (Under final rejection and appeal).

The invention as set forth in Claim 1 wherein said retention means is frictionally resiliently engageable with said at least one screw by placement between threads thereof to provide said retention.

Claim 3. (Under final rejection and appeal).

The invention as set forth in Claim 1 wherein said resilient retention means is resiliently positionable on the end of the shank of said at least one screw for frictional resilient engagement therewith.

Claim 4. (Under final rejection and appeal).

The invention as set forth in Claim 1 wherein said resilient retention means comprises a member composed of resilient material.

Claim 5. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means is thin relative to the length of said at least one screw.

Claim 6. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means is composed of resilient metal.

Claim 7. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means defines at least one internal opening for being positioned onto said at least one screw from the end of the shank thereof.

Claim 8. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means defines at least one lateral opening having two separate ends for sideways resilient positioning of said retention means upon the shank of said at least one screw by resiliently displacing from each other said two ends of said at least one lateral opening to accommodate said at least one screw.

Claim 9. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said retention means has a generally circular configuration.

Claim 10. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said retention means has a generally square configuration.

Claim 11. (Under final rejection and appeal).

The invention as set forth in Claim 7 wherein said at least one internal opening is substantially polygonal.

Claim 12. (Under final rejection and appeal).

The invention as set forth in Claim 2 wherein said resilient retention means includes adhesive means for adhesion to said at least one screw.

Claim 13. (Under final rejection and appeal).

In a pipe coupling system for coupling pipe ends in substantially fluid – tight relationship including gasket means positionable on said pipe ends and clamping means fastenable on said pipe ends and said gasket means, said clamping means being fastenable by securing at least one nut on said at least one screw insertable through at least one screw hole in said clamping means, said at least one screw being loosely disposed in said at least one screw hole prior to securing of said at least one screw by said at least one nut, the improvement comprising:

resilient retention means for loosely retaining said at least one screw in place when loosely disposed in said at least one screw hole inserted in said clamping means and prior to fastening of said

clamping means by securing said at least one nut on said at least one screw, said resilient retention means being resiliently positionable from the side of the shank of said at least one screw into retention engagement to loosely retain said at least one screw in said at least one screw hole.

Claim 14. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said retention means is frictionally resiliently engageable with said at least one screw.

Claim 15. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means is resiliently positionable at the end of the shank of said at least one screw for frictional resilient engagement therewith.

Claim 16. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means comprises a member composed of resilient material.

Claim 17. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means is thin relative to the length of said at least one screw.

Claim 18. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means is composed of resilient metal.

Claim 19. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means defines at least one internal opening for being placed onto said at least one screw from the end of the shank thereof.

Claim 20. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said retention means defines at least one lateral opening having two separate ends for resilient sidewise placing of said resilient retention means upon the shank of said at least one screw by displacing said two separate ends from each other to accommodate said at least one screw.

Claim 21. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means has a generally circular configuration.

Claim 22. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means has a generally square configuration.

Claim 23. (Under final rejection and appeal).

The invention as set forth in Claim 19 wherein at least one internal opening is substantially polygonal.

Claim 24. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means include adhesive means for adhesion to said at least one screw.

Claim 25. (Under final rejection and appeal).

The invention as set forth in Claim 13 wherein said resilient retention means is positionable upon said at least one screw from the side of the shank thereof for frictional resilient engagement between threads of said at least one screw therewith.

Claim 26 (Under final rejection and appeal).

A method for facilitating coupling at least two conduits at their ends in substantially fluid-tight relationship comprising the steps of:

(5) providing gasket means for disposition upon said at least two conduits;

(6) providing clamping means for clamping around said conduit ends and including at least one screw hole for receiving at least one screw for fastening said clamping means upon said gasket means and said conduit ends in substantially

fluid-tight relationship by securing at least one nut to said at least one screw;

(7) placing said at least one screw loosely in said at least one screw hole prior to securing said at least one nut to said at least one screw; and

(8) disposing resilient retention means laterally upon the side of the shank of or upon the front of said at least one screw to prevent said at least one screw from exiting said at least one screw hole prior to said fastening of said clamping means and said gasket means.

Claim 27. (Under final rejection and appeal).

The method as set forth in Claim 26 wherein said resilient retention means is frictionally resiliently engageable with said at least one screw to accomplish retention thereof.

Claim 28. (Under final rejection and appeal).

The method of Claim 26 further including the step of fastening said gasket means and said clamping means onto said conduit ends by tightening said at least one screw until substantially fluid-tight relationship is achieved between said conduits.

Claim 29. (Under final rejection and appeal).

The method of Claim 26 wherein said conduits comprise pipes.

**RELATED
PROCEEDINGS
APPENDIX**

RELATED PROCEEDINGS: NONE